

ABB's LIBS Activities

John W. Regan (john.w.regan@usppl.mail.abb.com; 860-285-2249)
ABB Combustion Engineering, Inc.
2000 Day Hill Road
Windsor, Connecticut 06095

Abstract

The paper describes technologies developed for the control of NO_x, SO₂, and particulate emissions, and for increasing efficiency in the designs prepared by the ABB team for the U.S. Department of Energy's project titled "Engineering Development of Advanced Coal-Fired Low-Emission Boiler Systems" (LEBS), contract DE-AC22-92PC92159 (August 17, 1992 - August 15, 1997). The primary objectives of the LEBS project are to reduce emissions to approximately one-sixth of current New Source Performance Standards (NSPS), and to increase efficiency, all without increasing the cost of electricity.

The project encompasses the use of pulverized coal combustion and development of near-term technologies. The team selected an advanced low-NO_x firing system and an advanced dry scrubber system to meet the emissions objective, and an advanced power cycle to achieve the efficiency and cost of electricity objectives. The development and design of these emission control systems, which are suited to new or retrofit applications, are described in the paper.